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OLDEST BEE-PAPER IN AMERICA

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World's Fair Apiarian Exhibit.—On Saturday, May 20th, accompanied by Mr. W. A. Pryal, our jovial California correspondent, we visited the great Fair, and spent considerable time in the Agricultural Building, wherein are located the apiarian exhibits. After walking for a long distance on the first floor of the mammoth building whose area is a little over nine acres, we ascended to the second floor, at the eastern end of which is located the exhibits that will most interest bee-keepers.

Upon reaching the row of perhaps a dozen large glass cases built especially for the honey and wax exhibits, we found Mr. Allen Pringle and Mr. E. Whitcomb, the former having charge of the Ontario display, and the latter representing the progressive State of Nebraska.

At this time we will not attempt to give a minute description of the various apiarian exhibits already in place, but will reserve that for future numbers of the BEE JOURNAL. During the summer we will endeavor to give many interesting details of all the displays of honey, wax, and bee-appliances, and if possible to arrange, publish illustrations of them, which will aid those who may not be able to attend the Fair, as well as form a record for preservation.

We may say now, however, that the States of Nebraska, Wisconsin, New York, Iowa and Ohio have their exhibits of honey and wax either wholly or partially completed. Mr. Pringle was at work arranging a series of long tables, one above the other, within Canada's glass case, each table or stand being narrower as the tier neared the top of the case.

The cases are made of sliding glass doors, built upon a box elevation of perhaps three feet. All is made tight, so that no dust can get in where the honey and wax are placed. The glass doors can also be locked up, so that none of the exhibits may be carried off, or be handled in any way by those who view them. The cases are each 25 feet long, 7 feet high, and 4½ feet wide, inside measurement, and, with their contents of tempting sweets, present a most pleasing appearance.

Bro. A. I. Root had his exhibit of bee-supplies all in place. It is an instructive display, showing every implement and article used in a complete modern apiary, all arranged in such a way as to be seen at the best advantage. This exhibit is enclosed in a three-sided glass case, built against the outer wall of the main structure.

Among other exhibits of bee-supplies were those of Messrs. E. Kretchmer, of Iowa; Chas. F. Muth & Son, of Ohio; C. H. Putman, of Wisconsin; Lester L. Price, of Nebraska; A. G. Hill and G. K. Hubbard, of Indiana; and The Falconer Mfg. Co., of New York. As before mentioned, we will give detailed description of these and other apiarian exhibits later.

One Cent Postage Stamps we prefer rather than two cent ones. When sending fractions of a dollar, please send us the one cent stamps.

The Illinois Apiarian Exhibit at the World's Fair is now being arranged for. We have received a circular from Mr. Jas. A. Stone, Secretary of the State Bee-Keepers' Association, in which are given the Rules and Regulations for the Apiarian Exhibit of the Illinois State Bee-Keepers' Association, to be made at the World's Columbian Exposition, May 1 to Oct. 31, 1893.

The following is a copy of the circular sent out by Mr. Stone, and should be read by every subscriber to the BEE JOURNAL in Illinois:

To the Bee-Keepers of Illinois:

By an Act of the Illinois Legislature a sufficient sum of money has been appropriated to enable the Executive Committee of the Illinois State Bee-Keepers' Association to make a creditable exhibit of the apiarian products of the State of Illinois, in the National Agricultural Building of the World's Columbian Exposition.

The rules of the Department of Agriculture are given below.

It will be the aim of the Executive Committee to conduct the exhibit in such a manner that it will result in the greatest good to the apiarian industry of the State.

The rules of the Board of Control of the World's Columbian Exposition require all exhibits to be made in the names of the individuals exhibiting, and all awards must follow the decision of the national judges.

The committee propose to forward shipping-tags to all exhibitors, requiring them to carefully pack, prepay freight, and forward duplicate receipts to the Secretary of the Illinois State Bee-Keepers' Association, care of W. I. Buchanan, Chief of the Department of Agriculture, World's Fair Grounds, Chicago, Ills.

The Committee will pay all freight and expenses incurred in connection with the said exhibit, and will dispose of all the apiarian products consigned to them to the best advantage, and return the proceeds to the exhibitor; or they will, on his choice, be returned to the owner at his expense.

In case a shipment should not reach the Exposition in presentable condition, the Committee will dispose of the same to best advantage, and return the proceeds to the owner—which will not prevent him from sending another shipment in the same line.

Bee-Keepers of Illinois! Never before have we had such an opportunity to show our products to the world.

We must have the best the State can produce, and plenty of it, that we may maintain our reputation, and receive a large share of the awards.

We urge upon you the importance of the occasion, and ask you to send application for entry, and your assistance in distributing this circular, that a large proportion of the bee-keepers of the State may be represented. Either the President or Secretary of the Illinois Bee-Keepers' Association will be in charge of the exhibit.

Special Rules and Information Governing the Exhibit of Bees, Beeswax and Bee-Appliances.

1. Exhibits of Honey will be classified as follows:

Class 1—Clover and Basswood.
Class 2—White Sage.
Class 3—Buckwheat.
Class 4—All light honey, other than enumerated in Classes 1 and 2.
Class 5—All dark honey, other than enumerated in Class 3.

2. Exhibits of honey produced in 1892, or earlier, must be sent in as soon as possible.

3. Exhibits of Honey in Classes 1, 2, and 4, produced during 1893, will be received between July 15th and Aug. 15th; and in Classes 3 and 5, between Aug. 15th and Sept. 1st, 1893.

4. The following information should accompany each exhibit:

(a)—Kind of honey.
(b)—Name of exhibitor.
(c)—Place where produced.
(d)—Character of soil in locality where produced.
(e)—Variety of bee.
(f)—Name of plant from which honey was produced.
(g)—Yield per colony.
(h)—Average price of product in nearest home market.

5. The dimensions of cases in which exhibits will be made are as follows: Inside measurement—width of case, 5 feet; height, 6¼ feet; total height of case, including base, 8 feet.

6. Individual exhibits of comb honey will be limited to 100 pounds, and may be made in any manner the exhibitor may desire, subject to the approval of the chief of the department.

7. Individual exhibits of extracted honey must be made in glass, and must not exceed 50 pounds.

8. Individual exhibits of beeswax must not exceed 50 pounds, and should be prepared in such a manner as will add to the attractiveness of the exhibit.

9. Exhibits of primitive and modern appliances used in bee-culture, both in this country and abroad, will be received, subject to the approval of the chief of the department.

10. Special arrangements will be made by the chief of the department for a limited exhibit of bees.

11. Collections of honey-producing plants, suitably mounted and labeled, will be accepted if satisfactory to the chief of the department.

Please make your application *immediately*, that shipping-tags may be sent you, and full directions given.

For further particulars address,

JAS. A. STONE, *Sec.*

Bradfordton, Ills.

An Abnormal Season is what they have had so far this year in England. It has been unusually dry, and rain was needed very badly in May.

Preventing After-Swarms.—Bro. Hutchinson, in the *Review*, gives the following plan, by the use of the bee-escape:

Frank Coverdale writes me that he has prevented after-swarming by hiving the swarm on the old stand, then placing the old hive by its side with its entrance near that of the newly-hived swarm. The old hive is then closed, except that a bee-escape is placed in the entrance on the side next to the new hive. Of course, every bee that leaves the old hive never gets back, but finds its way into the new swarm. All of the working force, and all of the young bees when they come out to play, are thrown into the new swarm.

In seven or eight days the old hive can be given a new stand, the same as in the Heddon plan, but it will be completely robbed of all the bees except the young, downy, just-hatched ones, which is not the case with the Heddon plan, and after-swarming will positively be prevented in *every* case.

If no increase is desired, the escape can be left in place for a longer period, 21 days if the weather is warm, or, if it is cool, it may be taken away at the end of two weeks.

When the bees have all hatched out, the few remaining may be shaken off in front of the new swarm, and the honey extracted from the combs, or they can be used in any way thought best. Or the matter may simply be carried to such an extent that the old colony will be so weakened that not only will it not swarm, but it will not be sufficiently populous for winter, but will still be able to care for and protect the combs until fall, when the two colonies may be united, the better queen being preserved.

Introducing Queens.—The following directions for introducing queens we found printed on a queen-shipping cage recently:

After removing the cover, note the condition of the queen, and if she is all right, proceed to introduce her. First remove the slip of card from the end of the cage containing the candy. Lay the cage on the frames directly over the cluster, wire-cloth down, so the bees can become acquainted with the queen; cover the cage with the enameled cloth, or quilt, put on the cover, and do not molest the hive under any circumstances for five days, at which time you will likely find her out and laying. If you have a flat cover on your hive, just tack a thin strip of wood across the back of the cage, spread the frames, and hang the cage, face down, between the frames. Before introducing, be sure your colony is queenless.

A Binder for holding a year's numbers of the BEE JOURNAL we mail for only 50 cents; or clubbed with the JOURNAL for $1.40.

GENERAL QUESTIONS.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 25 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—ED.

Just a Word with You.

We mean with the readers of "General Questions." This department is meant for the benefit of all who may wish to avail themselves of it, and we wish our readers to feel the utmost liberty in sending in any questions to which answers are desired. Don't feel that you are intruding—we desire the questions as much as you desire the answers. This department lays no claim to infallibility, and it is possible that some of your questions may be too hard for it, but it does desire to be honestly helpful just as far as its ability goes.

Now a word as to the manner of sending your questions: Before us lie questions from two different persons. One of them is scribbled in pencil on what appears a scrap of waste-paper, somewhat crowded for room, and so hard to decipher that some words cannot be made out at all only as they may be guessed at from the connection. It is a real relief to turn from that to the other, which is written with some appearance of care, the writing being so plain that any schoolboy could read it. Now all cannot write like copper-plate, all cannot avoid mistakes in spelling, but please do what all can do, and that is, to make your questions just as plain as you can.

If you specially desire that your questions shall be answered in this department, just say "For General Questions." Also, please do not get in a hurry for the reply, as questions must take their turn, unless it be those that will not become worthless by a short delay, and thus can be put aside a time for such as are necessary to be answered at once in order that the reply be seasonable.

Drones and Swarming—Dead Bees.

1. Do bees ever swarm after they begin to drive off the drones? "A B C of Bee-Culture" says for the time being, but mine are at it now, and I had swarms in June, in 1892.

2. What was the matter with my bees? In February we had some warm days,

and I had one colony to bring out lots of dead bees, more than was usual. It was a small colony, and there were 150 bees dead with their heads to the bottom of the cells, and sealed honey around them. Their combs were clean, and the queen was dead. M. W. GARDNER.

Bankston, Ala., May 20, 1893.

ANSWERS—1. Yes, if there comes a dearth after drones appear, the workers may kill them off, and swarm when a new lot is reared.

2. It is nothing unusual for bees to carry out their dead when a warm day comes in winter. An unusually long spell of confinement would make an unusual number. Sometimes a small cluster gets separated from the main cluster and are found dead. In the case you mention, the number of bees may have been so small that they could not keep up sufficient heat.

Keeping Bees on Shares.

I have taken four colonies of bees on shares. The agreement is that they are to swarm once, and are to be worked for comb honey. The question is, would you, under these circumstances, put on any sections before they swarm, or wait until afterward?

The share that each gets is half the swarms and half the surplus honey.

Waupaca, Wis. SAMUEL TAYLOR.

ANSWER—One of the hard things to answer is a question about bees on shares. Unless everything is definitely agreed upon in advance, and put down in black and white, with such a variable factor as a colony of bees there is likely to be misunderstanding and trouble.

Your agreement seems to be an original one, that the bees "are to swarm once," and one would conclude that you are expected to make them swarm once, but you say nothing about the penalty in case you fail to make them swarm, nor what is to be done in case the little creatures take it into their heads to swarm more than once. Doubtless all second swarms can be prevented, but there do happen cases—would that they might happen oftener—in which bees stubbornly refuse to swarm. Suppose there comes one of those bad seasons when bees do not make a living, to say nothing about swarming, at the end of the season you are bound to return the four colonies together with four additional, and not one has swarmed, where are you? We know of a certain enthusiastic beginner in Iowa who took bees on shares with a somewhat similar agreement, and he actually had to give up all the bees he had and buy more to make good his agreement.

So you see it's a hard matter to answer your question without knowing what is to happen if you don't succeed in making the bees swarm. But the probability is that they will swarm more than you desire, and it may be your safest plan to put on supers before swarming.

Getting Rid of Black Drones.

How do the bees get rid of black drones, old and young, when Italianizing an apiary? R. C. FOWKE.

Baldock, S. C.

ANSWER.—The easiest answer to your question is to say, "They don't." That is probably the true answer in most cases. Even if you get rid of all objectionable drones in your own apiary, they may come from other apiaries about you. But with enough care it may be possible to control the matter entirely in your own apiary.

In the first place, prevention is better than cure. See that no drone-brood is allowed to hatch out. Slice off the heads of all sealed drone-brood. While you are at it, it may be well to cut out all drone-comb, putting in its place patches of worker comb.

But bees are very persistent in rearing drones, and if you leave them no drone-comb they will rear a few drones here and there in a very troublesome way. Doolittle's plan is to leave about an inch square of drone-comb in the hive to satisfy them, then you will know right where to look for drone-brood, and can shave off the sealed brood about every three weeks. To get rid of what are already hatched out, use the Alley drone-trap.

"A Modern Bee-Farm and Its Economic Management," is the title of a splendid book on practical bee-culture, by Mr. S. Simmins, of England. It is 5¾x8½ inches in size, and contains 270 pages, nicely illustrated, and bound in cloth. It shows "how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man." It also illustrates how profits may be "made certain by growing crops yielding the most honey, having also other uses; and by judgment in breeding a good working strain of bees." Price, postpaid, from this office, $1.00; or clubbed with the BEE JOURNAL for one year, for $1.70.

"Bees and Honey"—see page 707.

J. H. LARRABEE.

Mr. Larrabee, the subject of our sketch and picture this week, is one of the newest additions to our corps of query answerers. We had the very great pleasure of making his acquaint-

J. H. LARRABEE.

ance in October, 1892, at the meeting of the Illinois State Bee-Keepers' Convention here in Chicago. We had quite a visit with Mr. L., and felt that in him we had indeed found a good friend.

Mr. Larrabee has written perhaps more for the *Bee-Keepers' Review* than for any other bee-periodical, though the BEE JOURNAL has often been favored with contributions from his graceful pen and brilliant mind.

He was born at Niles, Mich., on Sept. 14, 1862. At an early age his parents removed to Vermont, where "J. H." went through the usual experiences of boyhood on the farm. At 14 years of age he was sent away to school, where he remained in academy and college for four years. After about three years of teaching school, chancing to be at home one spring he became interested in the bees and their intelligent management. With regard to his early experiences, Mr. L. writes:

"Well do I remember the first copy of the AMERICAN BEE JOURNAL I ever saw. I carried it to the field one day, to read when resting the horses at the end of the furrow, and accidentally dropped it in the mud. I can still find the marks of the fall upon this first copy."

His progress was rapid, as he adopted the chaff-hive system of wintering bees, and lost few bees in winter, while the excellent white clover and linden forage gave ample encouragement, from a worldly view.

During the past five years of general depression in the bee-business, his bees have not only paid all expenses, but wages of at least $50 per month for all the time spent with them. This fact proves not only that the Champlain Valley is worthy of the reputation it bears as an excellent locality for bees, but that proper care at the right time, and with a system that has something of system in it, are large factors contributing to success in bee-culture.

He has explained his system several times, wholly or in part, in the bee-papers, and, as he himself says, the only thing specially meritorious about it is that it *is* a system for the whole year, and that it is carried out practically, and all short-cuts to lessen work are thus taken advantage of.

For the past six years Mr. L.'s apiary has contained from 80 to 130 colonies of bees; and for the past four years he

has run an out-apiary of about 30 colonies for extracted honey.

In August, 1890, he became acquainted, personally, with the junior editor of *Gleanings in Bee-Culture*, Mr. Ernest R. Root, and in November of that year, when Prof. Cook was searching for an assistant in conducting the experiments in bee-culture that were undertaken by the authorities of the Department of Agriculture at Washington, Mr. Root referred him to Mr. Larrabee, and after inquiries, he was asked to fill the position, which he did to the best of his ability for two years, when the station was discontinued. The report of his experiments for 1892 will be printed, we think, in Bulletin No. 28 of the Department of Agriculture, soon to be issued.

Mr. L.'s present home is in Lansing, Mich. Although he is not, the present season, engaged in bee-culture, he retains his interest in the pursuit, and reads all the principal apiarian periodicals, so far as time will permit. His younger brother, Wallace, at Larrabee's Point, Vt., has charge of his bees, and he considers himself very fortunate in having a brother who can be depended upon to carefully care for his pets. W. G. Larrabee follows his brother in his love of the bees, and owns about 60 colonies himself.

Mr. Larrabee bears an untarnished record wherever known. He is unmarried, which, we think, must be wholly from choice. More will be heard from him bye-and-bye, we are led to expect, and we also sincerely hope.

Mrs. Jennie Atchley will attend the meeting of the horticultural society at Rockport, Tex., on June 20th. Bee-keepers will unite in the meeting, and a grand time is expected. A steamer will be placed at the command of the meeting, to be used on the Ocean as they may choose. Better go if you can, and have a good time, as well as get intellectual profit.

CONDUCTED BY

Mrs. Jennie Atchley,

GREENVILLE, TEXAS.

Texas State Bee-Keepers' Convention.

For the first time in many years I attended the Texas Bee-Keepers' Convention, its last meeting being held at the apiaries of W. R. Graham and Mrs. Jennie Atchley, in Greenville, Tex. There, in a beautiful grove of large oaks, surrounded by the busy bees, we went on April 5th and 6th, 1893. The weather was like summer, and the hum of the millions of workers was encouraging music to our ears. It filled me with the happiness and zeal of former days. The meeting was in the neighborhood in which I had lived for ten years, and the meeting of old friends and neighbors made it doubly interesting to me, since all evinced a real and undisguised pleasure in welcoming me. The days of our early acquaintance were gone over again, and it seemed more like a family reunion for pleasure than for the discussion of the subjects, for which we have assembled.

While Time had removed from us many of our most zealous workers, and wrought changes in the appearances of persons and places, yet that same confidence and affection existed, such as no calling or profession recognizes with that mutual feeling of friendship, like that of bee-keepers, more especially in our beautiful Southern home—our own beloved Texas. Too much cannot be said for our host, Wm. R. Graham, and hostess, Mrs. Jennie Atchley, who had taken careful pains to see that every arrangement for our accommodation and pleasure was complete, and to them we owe, in a great measure, the success of our meeting.

Bro. Graham is one of our oldest and most successful bee-keepers in the South, he is always "at home" to bee-keepers, naturally generous, and is in the zenith of his glory at a "bee-meet-

in'." He showed us through his supply factory, which he told us must be run day and night to keep up with the orders, and while it appeared to one who knew little of the demands of bee-keepers, that the stock on hand would supply every bee-keeper in the State for years, yet he assured us that he would, owing to the increasing demand, be compelled to put in a larger engine and increase his facilities in every direction; clearly illustrating the fact that these conventions have been the means of developing some of the best bee-keepers and most extensive apiaries in the South.

Through the kindness of Mrs. Atchley and her interesting family of queen-breeders, for every child from the oldest to the youngest handles bees like professionals, we were shown through the apiary; the beautiful queens from which are bred annually thousands of fine queens, the bright 5-banded workers, their gentle manners, being manipulated without smoke, all tended to prove the value of this strain.

While these little kindnesses shown us by the "out-door department," had their effect toward making the meeting a success, yet they bear only a passing interest when compared with the "bill of fare," and the manner in which it was served. In the announcements published, the password was, "No hotel bills," and be assured that Delmonico could not have served a *menu* that would have been appreciated by bee-keepers with such a relish. We are nothing if not chivalrous, and many of our lady friends showed their appreciation, in accompanying their husbands and sharing in their enjoyments.

(Dr.) Wm. R. Howard.

Fort Worth, Texas.

Mutual Aid, or Helping Each Other.

The following essay was read at the Texas State Convention held on April 5th and 6th, at Greenville:

It is with pleasure and great joy to me to be blessed with the privilege of meeting so many bright bee-keepers' faces. Let us endeavor to help each other, especially in this our loving pursuit—bee-keeping—and may we each and every one ever be ready to assist each other, and to bear one another's burdens in this great cause of apiculture in the South.

Let us all remember that our Sunny Southland is the paradise of the honey-bee, and I ask the co-operation of all present to assist me in this grand work of building up bee-keeping in the South. Let us know no North, no South, but may we work together as a band of brothers and sisters, and by our mutual assistance may we ever be made to rejoice that we have been the means of helping others along in this work.

In conclusion I ask the assistance of all present to help me in making the department of "Sunny Southland" in the American Bee Journal what it ought to be—a prize and a help to further the cause of bee-keeping in the South.

I wish to state that I would be glad to make the personal acquaintance of every bee-keeper here, and ask you before you leave, to come into my office and give me a shake of your hand. If there are any here that wish to subscribe for the "Old Reliable," I am ready and willing to take your names, and count you one of our band, and for an inducement I am prepared to give you the weekly American Bee Journal for one year for $1.00, and also a 200-page bee-book as a premium. I would be very proud, indeed, if every bee-keeper here would take it, as through its columns I hope to become more and more acquainted with you, and assist you all in my power to make your bees pay, and to give you value received when you read the American Bee Journal.

Jennie Atchley.

A Report from Tennessee.

The past winter was unusually severe, and as the fall crop was remarkably short, many bees died in this locality. I went into the winter with 78 colonies—some of them were nuclei—and have come so far with a loss of only 12. I need not have lost any if I had fed at the proper time, and in sufficient quantity. Several colonies that appeared good and strong last year, and from which I took no surplus, starved out before I knew of their necessities.

Feeding can be done here almost any time, if proper judgment is exercised. As an illustration: When the mercury was dancing around about 6° above zero at night, I knew some of my weak colonies were about gone up, so when the sun came out in the middle of the day, I examined them, and finding one in which more than half of the bees had starved, I gave them a frame of sealed honey, pushing it close up to the cluster. I think there was not more than a quart of bees living at the time. By abundant

feeding of syrup as soon as the weather would permit, they have prospered, and are coming on excellently.

FEEDING BEES.

I have tried putting syrup in empty combs, and hanging in the hive, but this is entirely too much trouble. The easiest and quickest way to feed with no special expense for feeders, is to set three or four cheap wooden dishes—such as grocers have to put butter in—upon the top of the brood-frames, put in some grass or weeds for "foot logs" for the bees, and pour in the syrup.

Ordinary porcelain bowls will do if you are sure to press the grass down well, and put in enough for it to fill up and hang over somewhat, for the little "ladies" to climb by. On pouring in a second time, use care not to drown the bees in the bottom of the dishes or bowls.

SYRUP FOR FEEDING.

My experience is that to put a lot of granulated white sugar into a tin bucket, and pour in enough warm water to dissolve it when stirred, makes it a first-class syrup for bees. I have been feeding considerable for nearly a year, and I have never known of its granulating yet. If I am in a hurry, I do not even heat the water.

THIS SEASON—PROSPECTS, ETC.

We had ten days of good weather during fruit-bloom, from about the 1st to the 10th of April; then cold, rainy, windy, and but little chance for work. Two days now bees have done some good work. Locust is beginning to bloom, and I think poplar also, but I have not been to the woods to investigate. I have had only one swarm so far—on the 18th. It weighed 4½ pounds.

Several cold days coming on, I had to feed. On examination this evening I found 3 colonies in destitute circumstances, and ministered to their wants.

I am a bachelor, and somewhat bashful in the presence of ladies, but I must thank the editor for assigning me to the care of Mrs. Atchley. Many perhaps will recall the fact that I was given an introduction to "Sunny Southland" when I wrote some months since.

LEWIS K. SMITH.

Gainesboro, Tenn., April 25, 1893.

Have You Read that wonderful book Premium offer on page 707?

Honey an Animal or Vegetable Substance.

Query 874.—Is honey an animal or vegetable substance?—W. D.

Both.—S. I. FREEBORN.

Vegetable.—M. MAHIN.

Vegetable—E. FRANCE.

Vegetable.—P. H. ELWOOD.

Vegetable.—DADANT & SON.

I don't know.—C. C. MILLER.

Vegetable.—J. H. LARRABEE.

Vegetable.—WILL M. BARNUM.

Vegetable.—MRS. J. N. HEATER.

First, vegetable.—J. M. HAMBAUGH.

Vegetable, and *not* "*digested* nectar."—J. P. H. BROWN.

It certainly isn't animal, unless bees *make* honey.—EUGENE SECOR.

Largely vegetable, with a small trace of animal substance.—H. D. CUTTING.

The nectar used in producing honey is from a vegetable source.—G. M. DOOLITTLE.

Vegetable. It is the product of a plant, gathered by a bee.—MRS. L. HARRISON.

In so far as it is gathered from flowers, of course it is vegetable.—R. L. TAYLOR.

We will believe it is vegetable until we have evidence to the contrary.—JAS. A. STONE.

A vegetable substance, more or les modified by animal secretions and diges tive processes.—JAMES A. GREEN.

Honey is the inspissated nectar of flowers, and though gathered by bees its origin is vegetable.—G. L. TINKER.

Like the sugar which comes from the starch in our own digestion, I should call it a digested vegetable.—A. J. COOK.

If honey is digested nectar, I *guess* it's an animal substance. When I have digested food it becomes most thoroughly animal.—A. B. MASON.

Honey is in no sense an animal substance. It is principally vegetable glucose. The water and some minor salts are mineral.—C. H. DIBBERN.

Honey from flowers is purely vegetable. Honey that exudes through the leaves of plants, caused by lice, or other insects, may be called "insect honey."—MRS. JENNIE ATCHLEY.

Neither. Honey no doubt is of a vegetable nature. It is secreted by vegetables, and gathered by animals, passing through some changes in the process. Exactly what these changes are is not fully known. Some of us think we know what they are *not*.—EMERSON T. ABBOTT.

Vegetable. It the natural secretion of flowers, gathered by the bees. Whether any chemical change takes place or not in the stomach of the bees while conveying it from the field to the hive, is a mooted question. In no case, however, can it be an animal substance. —J. E. POND.

It is vegetable, pure and simple. Honey is nectar secreted by nectar-bearing plants and trees, collected by bees and evaporated and cured by them. It takes on by absorption more or less of formic acid by reason of being in contact with the heat generated by the bees. This can be proven by evaporating sugar syrup over a strong colony of bees with wire-cloth between the bees and the syrup.—G. W. DEMAREE.

CONVENTION DIRECTORY.

Time and place of meeting.

1893.

June 16, 17.—S. E. Kansas, at Bronson, Kans.
J. C. Balch, Sec., Bronson, Kans.

Oct. 11, 12, 13.—North American (International), at Chicago, Ills.
Frank Benton. Sec., Washington, D. C.

☞ **In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.**

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller....Marengo, Ills.
VICE-PRES.—J. E. Crane.....Middlebury, Vt.
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National Bee-Keepers' Union.

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Progression in Bee-Culture—Hive-Invention.

Written for the American Bee Journal

BY JOS. E. POND.

Prior to the introduction of the movable-frame principle, the science of bee-culture, although at the hands of the late Quinby, of Langstroth, and a few others in the United States, and of Dzierzon and Huber on the other side of the water, had been decidedly advanced from its prior position, yet so far as the general public is concerned, it was but little understood or appreciated.

The difficulties attending scientific investigation and research were so great, that the large majority had neither the time nor the means of accomplishing anything of lasting value. It is true that some of the principles that lie at the bottom of, and form the foundation to, the business, were partially understood, and to some extent were promulgated, but superstition, prejudice and ignorance on the part of the masses, fostered by a few humbug bee-quacks, had taken so strong a hold upon the minds of the majority, that even a slight step forward was looked upon with distrust; and this is so true, that even when movable-frames were first introduced by our own prince of apiarists, Langstroth, they were looked upon with the same suspicion that they are viewed by the few, who, it would seem, prefer remaining in ignorance, rather than to become educated as they might.

This ignorance and prejudice was fostered, to a great extent, by the fact that every "new thing" in the way of a hive, or of a fancied improvement, was at once covered by a patent, and "farm rights" were hawked around the country, to be found, on investigation after sale, of no value whatever, thus causing the purchasers to lose faith in invention, and their fellow men.

Now, while I myself, as I have many times stated, am in favor of patents,

and believe fully that every one should be as much protected in the labor of his brain, as in that of his hands, still I also believe that the application of the patent law as made to apicultural implements, has done much toward preventing advancement in the science of apiculture; and further, I believe that so long as the public are constantly threatened with suits for damages, by those who have secured patents on combinations of old principles of value, in connection with some new feature of no practical value whatsoever, that advancement will be slow, and real progress retarded.

What gave the impetus to bee-keeping as a science? Was it not the introduction of the movable-frame principle? And what really valuable step in that direction has been taken since that introduction? At least what so-called improvement has been made, that has been of any real, positive benefit? I confess I am unable to learn of any. It is true that in some minor points, improvements have been made, but those improvements have not been the result of the working of any one particular mind, but are the aggregation of the workings of many, each contributing a small share in producing the grand result.

The arguments and claims that are being made at the present time, in regard to the actual ownership of this or that feature, seem to be overshadowed in the minds of the people by the query of, What do they amount to, after all? Great claims are made for them, and great results promised by their use; but let us inquire if any better results have ever been accomplished by the use of these much-lauded "patented things," than in the use of the frame hives that have been before the public since the original was introduced by Father Langstroth. If they have, where is the record? I am anxiously looking for it; it has been promised frequently, but the promise is not yet redeemed by fulfilment.

All I can say is, there are now in use many unpatented hives that have recorded better results than I know of being made by those patented of late, and from which we were promised such immense gains. These old hives are the very ones that have been the means of giving the general public that enlightment it now possesses; and until something is offered in their place, with a proved record of superiority, it looks to me like the height of foolishness to discard them for the new, simply because they bear the magic imprint—"Patented."

I write in the interest of no one; I assail no one; I stand on the broad ground of historical fact, and ask—In what have I stated an untruth, or been guilty of endeavoring an error? If I am right in my position, my work is a public benefit; if I am wrong, show me the proofs, and I will retract. Till such proof is offered, I consider that I am but doing a duty in presenting my views to an intelligent public, and am ready to stand by its verdict.

North Attleboro, Mass.

Something About the White Sage of California.

Written for the American Bee Journal

BY C. W. DAYTON.

That renowned California white sage is now (May 20th) approaching an endless sea of bloom, and why the bees do not gather honey from it is a most profound mystery to me. I examined it this morning, yesterday, day before yesterday, and several other times before that, and honey is so abundant in the flowers that I could plainly see and taste it—in fact, there is a small drop in each blossom, and from three to five blossoms would make a good load for a bee.

In all I have only seen two bees at work on it, while this morning, in ten minutes time, I saw four humming-birds and two very large jet-black bumble-bees, and they were very busy, so busy that the humming-birds continued to visit the blossoms right close by me. Ants are also busy on it.

The bees are gathering honey very slowly from wild alfalfa, which is about like heart's-ease in quality, and amber in color. Black or burr sage has been in bloom for some time. The bees work on it considerably, but I can see or taste no honey by examination of the tubes. I believe if my bees were in a location where there was nothing but white sage (and such locations are hard to find), perhaps they would work on it, and they would be able to fill the hives rapidly where it is more a matter of waiting and hoping than anything else to see them fill up from wild alfalfa, horehound, oranges, etc.

If white sage is so beneath the notice of our common honey-bees, and so attractive to humming-birds, bumble-bees and ants, I wonder what *Apis dorsata* would think of it. Several colonies of

Punic bees I know in this neighborhood have the reputation of storing more honey than other bees last season, and I suspect it was from white sage.

That nameless disease, or bee-paralysis, has attacked about 15 of my colonies. In the colonies attacked, the bees all wear yellow stripes, while out of 60 colonies that show no yellow stripes at all, all are healthy and vigorous.

Pasadena, Calif.

Puzzled on Reproduction in Honey-Bees.

Written for the American Bee Journal

BY DAVID K. BRIGGS, M. D.

Having lately caught the "bee-fever," I have read everything in reference to bees with a great deal of enthusiasm, but I have recently run across a statement that sets all the accepted laws of reproduction at variance, that I write for further information and enlightenment on the subject.

On page 16 of "Bees and Honey," in speaking of the egg-production of the queen, the author says: "Each egg, which receives one of the seminal filaments in passing, will produce a worker or queen, while an unimpregnated egg will produce only a drone. The spermatheca of an unfecundated queen contains only a transparent liquid with no seminal filaments, and the eggs of such a queen produce only drones."

Again, on page 462 of the AMERICAN BEE JOURNAL for April 13th, Mrs. Jennie Atchley says: "I noticed that every single queen that became stimulated for egg-laying, never became impregnated, but was always a drone-layer."

It has been generally accepted as a fact that it requires impregnation from the opposite sex before reproduction can take place, be it flowers, insects, animals, etc., and I did not think that bees were an exception to this rule. While intercourse is not necessary for egg-laying, it is absolutely necessary for fecundation. If some one should tell Mrs. Atchley that if she kept no rooster with her hens, that if she would set the eggs they would hatch out all roosters, she would laugh at the idea.

I think that where a queen was stimulated for egg-laying before mating with a drone, that *after* she *had mated* her eggs would be more likely to hatch out drones, than in a queen which had mated before becoming stimulated for egg-laying, as suggested by a theory lately advanced, "that the greater the passion of one of the parents, the offspring would be of the opposite sex."

Blackville, S. C.

[The fact that a queen that has never met a drone may lay eggs which will hatch, was fully established by the great bee-master Dzierzon 40 years ago. It was bitterly opposed for a time, but the introduction of the Italian bee gave opportunity to settle some of the chief points at issue in the Dzierzon theory, and all intelligent apiarists soon gave in their assent. Other points of great interest are involved, and whoever wants to have an intelligent understanding of the subject should not fail to invest 15 cents in the little book containing the "Dzierzon Theory," which can be had at the BEE JOURNAL office.—ED.]

Report of Experiments in Wintering Bees.

Written for the American Bee Journal

BY B. TAYLOR.

Nearly all apiarists agree that successful wintering is one of the most important questions connected with bee-keeping. There is more loss from failure in wintering than from all other causes combined. There has always been much difference of opinion among leading lights as to the real cause of bad wintering. Some apiarists laid the cause to lack of ventilation in wintering-cellars; others, to the over-abundant supply of pollen; others, to poor food—honey-dew, late fall honey; too much ventilation of hives; too little ventilation; and many other fancies have been brought forward.

Lately sealed covers have been brought forward as a great remedy for winter troubles. Books have been printed and widely advertised recommending this new discovery. This new theory was from the first, to my mind, contrary to both theory and practical experience, yet I gave it a thorough trial, only to meet with severe loss.

In the fall of 1892 I resolved to begin a series of more careful experiments in regard to the part the preparation of hives themselves played in wintering. I had, what I have now reason to believe

to be a fact, a wintering-cellar as nearly perfect as present knowledge permits, hence any cause of loss would be in the condition of the colonies and hives themselves, and not in the place they were kept. So I resolved to try several plans of preparing the hives for winter.

No. 1.—I prepared 25 hives as follows, and placed them in one division of my new cellar: I gave each colony two sections of my double hive, removing two combs from each section, and leaving eight combs in each. These eight combs were spread to fill the 10-frame hive. The hives were raised two inches from the bottom-board; when all was quiet, a piece of light cotton cloth was spread over each hive, and on top of this was placed a shallow box (3 inches deep) full of sawdust. The entrances at the bottom were left open the entire width of the hive, front and rear. Now, remember these colonies were each left on 16 combs in two sections of a shallow hive, thus making very roomy quarters. Each had large stores of sealed honey, mostly in upper sections. The temperature was about 42°, without 2° of variation.

No. 2.—I next prepared 25 hives exactly as in No. 1, except that the solid hive covers were left on, and then four strips of wood 1/25 of an inch thick were used, one under each corner of the cover, raising it slightly from the hive top, and leaving a little ventilating crevice on all sides of the top of the hives. They were placed in the same apartment of the cellar as No. 1.

In the other apartment of the cellar 20 hives were placed with sealed covers on, just as the bees had left them. The covers were ⅞-inch boards, and the hives were full brood-chambers, holding 10 frames, 8x13⅜ inches, inside. They were raised 2 inches from the bottom-board, were good colonies with plenty of honey, were put in at the same time as the others, and kept at the same temperature (42°) as the others.

On April 6th, in an article for the *Review*, I wrote this in regard to the groups Nos. 1 and 2:

"These bees have remained quieter the entire winter than any like quantity I ever knew, and I examined them today, and they are all alive, and absolutely quiet. There is not a speck of diarrhea on one of the white hives, and there has been less dead bees on the cellar bottom than I have ever had from a like number of colonies. These bees are still in the cellar, and at present it looks like a case of perfect wintering. But it does not prove that they might not have wintered equally well without covers of any kind, and with less work in preparing."

At the time of writing the above, there was a day or so of fine weather, and I commenced to move my bees from the cellar to the summer stands, but had the good luck to only get out 10 colonies the first afternoon; the next morning the weather turned cold and stormy, and continued so until April 20th, when snow fell to the depth of 15 inches, and from that day until May 8th there was not a day in which I could safely put out the bees.

Let me here say that in my article of April 6th I reported, in mentioning the 20 colonies with sealed covers, "They have been more restless than those covered with porous covers, the hives are damp and and unsatisfactory, and more bees have flown to the cellar floor."

Early in May I became alarmed for the safety of my bees, the weather continued so cold that I dared not put them out, and I found several dead, but they continued very quiet, without the least sign of diarrhea, and on May 6th I began to put them out. As those lots Nos. 1 and 2 were very quiet, I began in the south half of my cellar in which the 20 colonies were. There were also some 50 colonies in this part in double hives, of my old double brood-chamber style, with combs only 4⅛ inches deep; the covers on these were raised slightly with thin strips of wood like group No. 2. We found these bees in good condition, but about 10 per cent. were dead from starvation,

We next went to the hives with sealed covers, and 19 out of the 20 were dead. The hives contained stores in plenty, but the hives and stores were soaked with water, and combs nearly rotten with mold—nearly the whole colony of dead bees were on the bottom-boards, in a stinking, disgusting mass.

The weather continued fair, and on May 8th we began to remove group No. 1 to the new house-apiary. These colonies had about 5 per cent. loss by starvation, but the bulk of them, seeing they had been confined without a flight for six months and four days, were all that any one could wish; the hives and combs were dry and clean, many of the bottom-boards were nearly as clean as in summer, the bees were so bright and so still that we carried all of the 24 colonies that I put into the house-apiary without closing the wide entrance in either front or rear, and I believe without a single bee taking wing, and some

colonies remained several hours before they found that they were at liberty.

We found group No. 2 with board covers slightly raised, in about the same condition as No. 1, except I must confess, in just a little better condition taken as a whole. The hives, combs and bees were all one could ask, and speaks volumes for top ventilation. I never removed all these hives from the cellar until May 12th, but found the colonies all right at that date.

This seems too late in the season to expect good results, but as the willows, boxwoods and soft maples are just coming into bloom, and as clover is booming on every hand, the people at the Forestville apiary are cheerful and full of confidence for the future of the honey-business. The 12 colonies in the small house-apiary had 2 dead that were entirely out of stores. The colonies with enough honey wintered in the past most trying of winters (in which they never flew from the hives for 4½ months) in a more perfect condition than colonies in the cellar; the hives, combs and bees were without dampness or mold, and some of the bottom-boards entirely clean of dead bees.

I can say I believe truly that I lost 19 colonies the past winter in farther testing sealed covers. I first thought they had starved, but we have just finished cleaning up the hives and combs, and found every hive with an abundance of sealed stores.

I have long believed that the proper preparation of the hives for winter is the key to safe wintering in a good cellar, and I am thoroughly convinced that except to keep out mice and other intruders, hives with the covers entirely removed, or with a single thickness of burlap or cotton sheeting spread over the hives, is better than any cushion or cover of any kind. My next choice is building paper; with this I have not a single fault to find, except the trouble of putting it on, and if I were going to use tight covers, I would perfer it to the best absorbent cushion you could make, with any material that I am acquainted with.

I visited a bee-keeper at Dover, Minn., last March, who has been very successful in wintering bees. He leaves the hives entirely without covers. For full particulars of this visit, please see the *Bee-Keepers' Review* for May, 1893, page 129.

I saw in a late number of *Gleanings* that Mr. Foster, of Mt. Vernon, Iowa, has been visiting an Iowa bee-keeper that has been very successful in wintering bees with a single thickness of cotton sheeting spread over the hives; and those that have read the early writings of Mr. Quinby, remember that before he adopted the movable frame he wintered his bees in box-hives in a dark room, the hives being turned upside down, and left entirely uncovered, and I do not believe there is a better plan to-day.

This may seem a long report on wintering, to make at this time of the year, but I have just received a letter from a Minnesota bee-keeper who has lost all his bees—253 colonies — this winter, and I am convinced that 75 per cent. of all the bees in this section are dead to-day, so you see wintering is a vital question, and there is no better time to impress people with it, than when they are feeling their heavy losses.

Forestville, Minn., May 13, 1893.

Destroying Moth-Millers--Quack Bee-Keepers Described.

Written for the American Bee Journal

BY R. C. HATCH.

I think I can positively say from experience that the Italian bee is moth-proof, after having kept Italian bees in Illinois for five years, and never had the least particle of trouble with moths, even in weak or queenless colonies. It is natural to suppose that moths should be more prevalent in certain localities, considering the surroundings, that is, whether bees are kept for profit by apiarists, as in Illinois, or as they are kept here in Iowa by Tom, Dick and Harry, in the back garden, where one to six empty hives are left to breed moths every summer.

Black bees are kept almost entirely here, and although they are good honey-gatherers, it is one continual source of trouble to keep the moths out; whether it is the negligent surroundings or the black bee, I have as yet been unable to ascertain.

There are a number of ways of ensnaring the moth-millers about the apiary. Although they may not be very practical, large numbers of them can be exterminated in the following way with but little trouble:

Fill a jar about two-thirds full of water, and sweeten it with a little sugar, or maple sugar is better; set it out among your bees after dark. It will attract them, and when once in the jar of water they are yours.

Another way is to set a torch among your bees after dark, in such a position that it will shine on the back of the hives. This will also attract the millers.

Still another way is to set two boards up edgewise, half an inch apart at the bottom, and tight together at the top. Set it in some shady place near the apiary, and if old boards are scarce about the apiary, you will find the pests secreted in the trap.

But those apiarists having Italian bees I think will not have to try these methods of exterminating moths, as the bees will take care of them. I hardly think it worth while, in my case, to attempt to ensnare the millers, as for every one I would trap my neighbors would rear five, which looks discouraging in the beginning, and would likely turn out so in the end. There are quite a number of old bee-keepers in this vicinity, and they really are old bee-keepers indeed, they being old-fashioned as well as behind the times. Most of them are thoroughly versed in bee-keeping (in their estimation), and they can tell their theories and experiences, but don't care to hear yours. They use the same kind of hives their grandfathers used, which everybody knows is a common box with sticks through the center; for, as my neighboring apiarist said, "They have been thoroughly tried and proved a success."

My neighbor had three times as many bees as I last spring, and I got more honey from one colony than he did from his entire apiary. His management of bees is about this:

He makes not less than three raids on them during the season, his first adventure being to sneak upon them some warm day in the spring, when they are having a flight, in order to count them, which he generally succeeds in doing. He then lets them alone until they have nearly swarmed to death, and the honey season is about over. He then concludes it is about time to put on surplus boxes, which he generally succeeds in doing with more or less stings. I can generally tell when he has been putting on the surplus boxes, by his disfigured countenance. Much depends upon how his smudge of sulphur and rags works.

His last, but not least, grand final raid is to harvest the crop, which is quite a peaceful affair. He makes it an object to wait until it has frozen up, and then his bees are quite gentle and harmless. I never heard of his selling any honey, there being two pretty good reasons why—first, his honey was not put up in salable packages; and, second, he seldom found enough to pay to try to sell. But nevertheless I will take mine in scientific bee-keeping, with the rest of my apiarian friends.

Central City, Iowa.

Nucleus Method of Replacing Winter Losses of Bees.

Written for the American Bee Journal

BY C. E. MEAD.

The eggs hatch by heat of the bees, therefore the warmer you can pack them the more eggs they can care for. Colonies of only two or three frames of bees may be made to increase rapidly by placing a division-board in confining them on the number of frames they cover, leaving the other frames in the hive, and allowing space under the division-board for the bees to pass under and get the honey. If there is no honey, put in some sugar syrup, and keep the entrance small. Place an oil-cloth on top of the frames and division-board, so the heat cannot go over the top of the division-board. You will have to move the division-board as often as once a week.

My Langstroth frames average about 8x12 inches of brood, which will average about 50 bees to the square inch, or 4,800 bees to the comb. That number will more than care for two combs, so they double as often as every ten days, in geometrical progression, until the capacity of the queen is reached.

In an average season, with the above treatment, a two-frame nucleus put into a hive of combs will have it full of bees by linden bloom, if put in on June 1st, in this locality.

I had, one year, two one-frame nuclei, each one of which filled a two-story hive, and one swarmed three times, and the other twice.

Do not be discouraged; work for a big yield this year, as it should be a linden year in Illinois.

I like wide frames best to get bait sections early. In a 10-frame hive seven brood-frames and two wide-frames, the two wide-frames give 16 sections; when well started, place in the super above, and put in their place empty frames, foundation, combs, or dummies, according to the strength of the colony.

Wide-frames should be put on the outside, with a frame of capped brood next to them, the combs of young larvæ and some empty ones to be put in the center.

Chicago, Ills.

An Experience Extending Over Several Years.

Written for the American Bee Journal

BY MATH. RADER.

In the spring of 1887 I received a colony of bees in an 8-frame Langstroth hive from a friend of mine. The colony cast two swarms during the summer, of which I kept the first, or prime swarm, only; the second swarm being returned after the queen-cells had been cut out of the parent colony, as directed by my friend.

By fall the two colonies had gathered about 50 pounds of surplus honey, and had plenty to winter on. I then bought 6 colonies more, all of which I wintered, and commenced in the spring of 1888 with 8 colonies in good condition. I increased them to 17 during the season, and secured over 800 pounds of very nice comb honey in one-pound sections, as basswood, or linden, had lots of honey that year, and, besides, the bees had enough winter stores to carry them through without any feeding. After this the dark side turned towards me, in regard to basswood giving honey.

In the spring of 1889, I took the 17 colonies out of the cellar in good condition except one, which was queenless. I at once ordered a queen from Texas, and strengthened the colony with brood from others, until the queen arrived. That year was the first poor honey-flow, white clover was very scarce, and worms, or caterpillars, commenced that summer to destroy the forest leaves and blossoms on basswood trees, and the 17 colonies gave me only 6 prime swarms, and about 600 pounds of honey, which was mostly dark or fall honey, and they were short of stores the next spring, so that I had to do some feeding.

In the spring of 1890 I took the 23 colonies out of the cellar in good condition, but one being queenless, which I united with another. I then started with 22 colonies, and with good courage. The beginning of the honey-flow from fruit-bloom was good, but white clover was scarce yet, and the basswood a total failure, as that was the first year that the caterpillars destroyed all the leaves on basswood, and also the blossoms, so that not an ounce of basswood honey could be expected in this neighborhood; but the bees had swarmed quite early, and I increased them to 36 colonies, but received only about 350 pounds of comb honey from the 36 colonies, fall count, and had to do some feeding to some colonies to carry them through the winter, and had to do lots of feeding in the spring to keep them in good condition, as I thought that the poor years would be over, and had learned from my books and journal that this was an important thing to have the bees strong when the honey harvest opened.

I took out the 36 colonies in the spring of 1891 in good condition, not having lost a single colony, and started again with good hopes. I increased my apiary to 53 colonies, as fruit-bloom and clover was quite good for the beginning, but as our main honey-source should commence to come into bloom (the basswood)—alas, there was no prospect at all to get one pound of basswood honey, as the leaves were all destroyed by the worms, so that our woods looked a good deal as in the fall, with hardly any leaves on any kind of trees, and I was cruel enough to take all the honey I could get from the bees—about 700 pounds in all—which they gathered in the fall, and when the honey-flow was over, my bees were short of stores for the coming winter, and I had to feed over 250 pounds of granulated sugar syrup to get them through the winter, but had to see that I had not supplied all of them to carry through the winter, and found, on putting them out of the cellar in the spring of 1892, that four had starved, and two were queenless, which I united.

I will now try to tell how I managed the 48 colonies that I had left, in the season of 1892, which was a better year for me than the three foregoing, but I did not want any increase on account of the previous year, when the caterpillars destroyed the basswood blossoms.

Those colonies that swarmed at the beginning of the clover honey-flow (which was quite late on account of the rainy weather we had last spring) I took out four frames of the parent colony, which were mostly sealed brood, and put into a hive with some bees, and put the hive with the four frames on a new place, then all queen-cells were cut out of the four frames that were left to the parent colony, and I placed four frames full of foundation in place of the four removed, and the swarm was returned to the parent hive.

Later on I tried several swarms by taking only two or three frames of brood from the parent colony, cutting out all remaining queen-cells and filling the vacant places with frames that were wired and filled full of foundation, and

the swarm was returned to the parent hive, and most of them also went to work and did not swarm any more that season.

Others I hived in a new hive, gave them one frame of brood and eggs in all stages, 2 or 3 drawn-out combs which I had from previous swarms that I had kept queenless after they had swarmed, and the young bees shaken off the frames every few days, wherever they were needed the most, the remaining places filled with frames full of foundation, the surplus sections removed from the parent colony, and put on the new swarm with two or three sections with drawn-out comb, which I had saved from the previous year, and also a queen-excluding honey-board between the hive and the sections, especially where no empty combs were in the hive by hiving the new swarm; and the new swarm was hived in the new hive so prepared, then the parent colony removed from its stand about two feet towards one side, and the new swarm put on the old stand. The parent colony was kept queenless by cutting out all queen-cells the fourth or fifth day after they had swarmed, and removed the hive towards the new swarm on the old stand so that they stood close together; after some days then put to the other side of the new swarm, and kept up moving from one side to another until the bees were all hatched and in the hive with the new swarm, and the bees worked very hard as far as I could see.

The empty combs were used to hive other swarms on, but not more than two or three empty combs were given to a new swarm.

At other times I hived two prime swarms in an empty hive with the sections on from parent colony and then put it on one of the parent stands where one of the swarms had come from. Those hived that way also staid without swarming again, but I doubt whether all these plans will work as well every year as they did last year, as the clover honey-flow was quite late here, although we had lots of white clover in bloom, but the weather being so rainy the bees could not work much the first part of the season. There was honey in the bloom, as the bees were just booming on it when we had a few nice days, and it kept in bloom until late in the fall, so that we got quite a lot of white honey last year. Basswood had not been damaged much by the worms, but did not bloom as nicely as years ago. Bees did not work on it more than two or three days, when it became very rainy, cloudy and cold for a few days, so that bees did not leave their hive, except a few hours in the middle of the day, and did not gather much honey from basswood.

However, I will not complain, as we got about 50 pounds per colony, spring count, of which 500 pounds was extracted, and the balance nice, white comb honey in one-pound sections. Our bees were very heavy with stores when put into the cellar last fall—some of them heavier than I wanted to have them. Some of them had over 35 pounds of honey when put into the cellar on Nov. 17th.

In regard to wintering bees in the cellar, I may say that I have never had the least trouble to get them through the winter in that way, as I have not lost one colony in wintering, except having a colony or two queenless, and four starved last spring. We keep the bees in the cellar under the house, and have potatoes, sauer-kraut, salt-pork and vegetables right beside the bees in the cellar. The only ventilation is a 3-inch pipe through the floor into the chimney. We keep a stove in the cellar, but have never been very particular to keep the temperature always the same, and not nearly as high as recommended in bee-books, although it is kept as near 40° as possible. The bees wintered very nicely the past winter, although we had very cold weather.

I would like to hear from the prominent and experienced bee-keepers as to what they think of my plan of handling bees the last season, especially hiving two prime swarms in one hive on the old stand. Does it really pay better, all other things considered, than to hive them separately, and take the comb honey, if only a little, extract from the brood-nest in the fall, and destroy the bees if not needed or wanted?

I would also be glad to hear from some Minnesota bee-keepers, whether they have had the same trouble with the worms destroying the basswood blossoms, and whether they have kept it up for many years. People in this vicinity claim that the worms were moving, and would be gone, while others claim that the wet and rainy weather kept them back last year. Probably bee-keepers in other States have had the same trouble, and could inform us how they got rid of the worms, as we have an abundance of basswood in this neighborhood, and I would be willing to increase my apiary a good deal if I could be sure the worms would leave us.

Raven Stream, Minn.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

After-Swarms—Preventing Them.

On page 648, in an item on "Preventing After-Swarms," by Mr. Doolittle, is this statement:

"In this way we can make sure that no swarm will issue after the first from this hive, and it is the only certain plan I know of."

Now, my experience of 25 years as a specialist in the bee-business will not admit of my endorsing that statement. I will admit that it is the rule, but there are so many exceptions to the rule, especially in a good swarming season, that it cannot be depended upon.

In seasons when the swarming fever runs high, I would go a little farther than Mr. D. does, and destroy every queen-cell, thus making them hopelessly queenless for two days; then give them a ripe cell or virgin queen. The rule given by Mr. D. has no exceptions, I think, with the black bees; but the Italians are not so easily controlled.

Independence, Mo. A. A. BALDWIN.

A Trip to New Mexico, Etc.

The weather has been very bad for bees here, rainy, cold, and windy; but there is a prospect for white clover, which is beginning to bloom, if we don't have too many hard rains that will wash all the honey out. I have three new swarms. I expect to take a trip to New Mexico this fall, and would like to hear from some of the readers of the BEE JOURNAL who live on the Texas Pacific, as I might give them a call. EDW. SMITH.

Carpenter, Ills., May 26, 1893.

Late Season—Strengthening Bees.

I fully believe that bees are one month behind of what might be called an early season. Mr. Doolittle need not think he is located in the coldest locality on earth.

I am only tending six colonies, and they are far behind an average season, so far as strength is concerned. One of them would have died from spring dwindling if it had not been strengthened by giving it young bees from other colonies.

I have mentioned this subject in the BEE JOURNAL in the past, but deem it of such great importance that I wish to do so again: Smoke each colony, and remove a frame of hatching brood from the strong one, taking care not to get the queen (if you have no queen-excluder to place at the entrance of the weak colony), and shake the bees at the entrance of the weak colony. The old bees will return to the colony taken from, but the young ones will remain with the weak colony.

Colonies that have but a handful of bees, and are too weak to care for brood if given them, may be saved by this treatment.

I am pleased to see so much interest taken in *yellow* Italians. They are the kind for me, and not only yellow, but *evenly colored to the tip*. I prefer a very dark one, if evenly colored, than a yellow one with a black tip.

J. H. ANDRE.

Lockwood, N. Y., May 15, 1893.

The Sugar was All Right.

I sent some of the sugar mentioned on page 633, to Prof. Cook for analysis, and received the answer, which I enclose.

Linwood, Mich. ANDREW GIRARD.

Here is Prof. Cook's report on the analysis of the sample of granulated sugar sent him by Mr. Girard:

The color is due to marine blue, which is added to make the sugar white. All our granulated sugar contains it. It is entirely harmless. A. J. COOK.

Fine Weather—Season Promising.

We are now having fine May weather, and the honey-flow from poplar and white clover is just beginning. From some cause poplar and white clover came together this year—something a little unusual in this locality. Poplar usually precedes white clover, but Dr. Miller's explanation as to the early blooming of dandelion will perhaps apply to white clover; that is, that the snows in the winter protected, or rather encouraged clover, which makes blooming earlier.

The season promises fine, but as predicted by me some time since, bees have failed to get as strong as they should be at the opening of the honey-flow. H. F. COLEMAN.

Sneedville, Tenn., May 13, 1893.

Queen-Cells Over Drone-Eggs.

I am going to contradict some of the "big guns" just to see how it goes to get under the fire of a whole battery of them at once.

In reply to Query 868, Dr. Miller says bees will not use drone-eggs to start "queen-cells" if they have others. Now, Doctor, just you get a queenless colony right anxious to build cells, then give them some frames of eggs, among which are some drone-eggs in *new* comb, and if they do not build cells over some of them, I will admit that I "don't know" anything about queen-rearing.

At the bottom of the column Mr. Doolittle says: "A queen-cell is *never* built over anything but a larva." Now, Mr. Doolittle, do you remember of sending me a queen in 1891? Well, after she got to laying, I put a frame of foundation in the middle of the brood-nest, and kept watch of it, and in 24 hours after she began to lay in it, I took it out and gave it to a hopelessly queenless nucleus to save until the larvæ would hatch: 24 hours later there were *over 40 cell-cups built* on that sheet of foundation, and each contained *an egg*; but by the time the larvæ had hatched, the bees had destroyed all but about a dozen; this was probably because there were only a quart of bees in the hive.

Now, I want to know what *kind* of comb Mrs. Atchley's bees built in that empty frame that she put in the brood-nest when the bees were working in the sections? See page 525. Such an operation *here* would *surely* result in a drone-comb, unless it was a newly-hived swarm not over three weeks old.

S. F. TREGO.

Swedona, Ills., May 4, 1893.

Hiving Swarms in Full Hives.

Last November I packed away 49 colonies, and on April 1, 1893, I put out 48, all in good condition. Being a beginner of three years' experience, I thought I had the bee-business to perfection; but, alas, on May 1st I changed my mind. I looked them over, and found 18 dwindled down, so I united them, putting as high as seven into one, then not having a good colony. Some of my neighbors did not unite theirs, and have lost all they had.

April was very changeable in this locality; bees would start out in search of stores and never return. To-day is fair weather for them to fly, and they are carrying in pollen. I have 30 colonies left, and 18 hives full of honey and pollen without bees.

Now will some one be kind enough to tell me what the result will be if I hive my new swarms in those hives, just as they are, leaving the hive full of honey and pollen?

J. W. MILLER.

Rodney, Mich., May 15, 1893.

Lost All but One Colony.

We had a very long and cold winter. A good many of the bees died. I started in the winter with 13 colonies, and I now have one. They had plenty of honey—from 7 to 40 pounds—except one. They kept dying from the middle of January to the middle of March. On April 1st I had two good, strong colonies that commenced to carry in pollen on March 30th, and did well until about the middle of April, when it turned cold and snowed, and we have had bad weather ever since, only a day now and then that bees could get out.

On May 9th they began to carry in pollen again, and I noticed one colony was not as strong as it was before the cold spell, and yesterday (May 11th) there were no bees flying in one hive. I opened it, and there was not more than 8 or 10 bees in it, and no brood. The hive was clean, no dirt or dead bees in it, and I judge about 25 pounds of honey. Where they went I don't know. Bees died in chaff hives here as well as in single-walled hives.

The BEE JOURNAL never fails to come on time, and I will say without fear of contradiction, that it is the best bee-paper printed in the United States.

H. T. LATHROP.

Bidwell, Iowa, May 12, 1893.

How the Bees Wintered.

I notice on page 598 is published the article I wrote about two months ago from Virginia. On my return home, April 12th, I found 4 of my 53 colonies dead—one from starvation, with honey in the hive; the bees were separated from their stores, and probably died during a long cold spell. One died of diarrhea, and two of dwindling. Since that I have lost three more by dwindling; thus I have lost 7 out of 53, which is not bad, I think, as we had a long, cold winter.

Of the seven that died, six were in double-cased packed hives, and one in a single-walled hive. Thus my loss was far the greatest in packed hives, and this has been the result of my experience for the past few years, and now my strongest colonies are those that were wintered in tiered-up hives two high, each with combs in, and no outside protection.

Bees are promising well here at present. No fast-bottom hives, and no chaff-hives for me. I have tried them.

CHESTER BELDING.

Middletown, N. Y., May 15, 1893.

Bees Booming—Doubling Colonies.

The bees are booming lately. One splendid swarm, after Nature's method, and one different from any plan yet named. I was a month getting this swarm. If the thing doesn't die in the borning—if it "pans out" well—then sometime I'll tell what kind of a caper I perpetrated on the bees.

How's this? Doolittle and R. L. Taylor are so near the top of the apiarian ladder that if they were to be pushed any higher they'd slip off the top. And yet the one (the latter) says double-up weak colonies in the spring about ten days before the expected honey-flow; and the other looks upon this practice with hesitancy and misgivings. Which is right? Which shall we follow? It is plain to me that Mr. Taylor's plan will work here in this hot locality—near Cincinnati. But as to doing so at Lapeer, must give us pause.

Has any one ever peeped it that bees *always* prefer to enter their hive at the right hand as you face the hive? So Mr. Alley's drone and queen traps should all be made with a *left-hand* slide for portico hives.

DR. ALBERT SAYLER.

New Palestine, O., May 22, 1893.

Great Premium on page 709!

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, June 3rd, 1893:

CHICAGO, ILLS.—Honey is about cleaned up so far as fine comb is concerned. Quite a good deal of poor to fair is on sale, prices ranging from 13 to 15c. Fancy would bring 18c. Extracted, 6@8c. Beeswax, 25c.
R. A. B. & Co.

KANSAS CITY, MO.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6.
Beeswax—20@23c. C-M. C. C.

CINCINNATI, O.—A short supply of extracted honey is the cause of a slow demand. It forbids an effort on our part to sell. It brings 6@8c. There is no choice comb honey on our market, and prices are nominal at 12@16c., in a small way.
Beeswax—Demand good, at 22@25c for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Comb honey is well cleaned up. Fancy white is selling at 14@15c. Off grades, 12@13c., and buckwheat, 9@10c. Extracted is dull, and the market well stocked with West India honey, which sells at from 68@75c per gallon. Beeswax, 26@28c.
H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality, 1-lbs. Beeswax is neglected at 22@23c. S., L. & S.

KANSAS CITY, MO.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8½; dark, 6@7c. Beeswax—23@25c. J. A. L.

BOSTON, MASS.—Honey is selling slow and prics are lower. Best 1-lb. comb, 16@17c.—Extracted, 8@10c.
Beeswax—None on hand B. & R.

ALBANY, N. Y.—Honey market is very quiet now, as between seasons. Beeswax—at 30@32c. for good color. H. R. W.

MINNEAPOLIS, MINN.—There is quite an active demand this week for honey, especially white comb honey in 1-lb. sections. Dark is very slow sale. Stock on hand in this market is very light. Receipts have not been enough to supply trade during the past 10 days. Fancy white conb honey, 18@20c.; No. 1 white, 17c.; fancy amber, 16c.; No. 1 amber, 14c.; fancy dark, 12c.; No. 1 dark, 10c. Extracted California 60-lb. kegs, 9c. Beeswax, unsalable. J. A. S. & Co.

Bicycles are getting to be very common now-a-days. We have two for sale, and any one wanting a bargain in a good bicycle, should write to the office of the BEE JOURNAL.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.
R. A. BURNETT & Co., 161 South Water Street.

New York, N. Y.
F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway

San Francisco, Calif.
SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.
J. A. SHEA & Co., 14 & 16 Hennepin Avenue.

Kansas City, Mo.
HAMBLIN & BEARSS, 514 Walnut Street.
CLEMONS-MASON COM. Co., 521 Walnut St.

Albany, N. Y.
H. R. WRIGHT, 326 & 328 Broadway

Hamilton, Ills.
CHAS. DADANT & SON.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central avs.

Bee-Keeping for Profit.—We have just issued a revised and enlarged edition of Dr. Tinker's book, called "Bee-Keeping for Profit." It details his most excellent "new system, or how to get the largest yields of comb and extracted honey." The book contains 80 pages in all, and is illustrated. Price, postpaid, 25 cents, or clubbed with the BEE JOURNAL for one year, for $1.15.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED to sell eggs from fine laying poultry. 50 cts. sitting. Write me.
G. E. SMITH, Longmont, Colo.

TO EXCHANGE—High Grade Safety Bicycle, for Honey or Wax.
17Atf J. A. GREEN, Ottawa, Ill.

TO EXCHANGE—New Cowan Extractor for choice extracted honey.
22A2 J. H. & A. L. BOYDEN, Saline, Mich.

BARGAINS—Harbaugh stock. Lang. Brood Frames, 50c. per hundred in 500 lots. Imp. L. S. Supers, $3 for a crate of 25. Only a few at these prices. E. T. ABBOTT. St. Joe, Mo.

Speaking of Family Story Papers, a well-known writer once said that the *Family Ledger* published in Los Angeles, Calif., is, without question, the cheapest and best printed illustrated family weekly in the world. Over 60 complete serials are run in a year's issue. The paper has many copyrighted features, and is illustrated each week. To those who are unacquainted with this remarkable periodical, a special offer is made of 10 weeks for 10 cents. Few that read story papers will allow an opportunity to pass whereby they can secure so unique a paper for such a small sum.
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Convention Notices.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on June 16 and 17, 1893, one mile west of Bronson. All are cordially invited to be present. J. C. BALCH, Sec.
Bronson, Kans.

INTERNATIONAL.—The North American Bee-Keepers' Association will hold its 24th annual convention on Oct. 11, 12 and 13, 1893, in Chicago, Ills. Not only is every bee-keeper in America, whether a member of the society or not, invited to be present, but a special invitation is extended to friends of apiculture it every foreign land. FRANK BENTON, Sec.
Washington, D. C.

"The Winter Problem in Bee-Keeping" is the title of a splendid pamphlet by Mr. G. R. Pierce, of Iowa, a bee-keeper of 26 years' experience. It is 6x9 inches in size, has 76 pages and is a clear exposition of the conditions essential to success in the winter and spring management of the apiary. Price, postpaid, 50 cents; or given as a premium for getting one new subscriber to the BEE JOURNAL for a year. Clubbed with the BEE JOURNAL one year for $1.30. Send to us for a copy.

Amerikanische Bienenzucht is the name of a bee-book printed in the German language, which we now have for sale. It is a hand-book on bee-keeping, giving the methods in use by the best American and German apiarists. Illustrated; 138 pages; price, postpaid, $1.00. It is just the book for our German bee-keepers. We club it with the BEE JOURNAL for one year, for $1.75.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Circulars have been received as follows:

H. P. Langdon, East Constable, N. Y.—Non-Swarming Arrangement.

S. L. Watkins, Grizzly Flats, Calif.—Strawberries.

C. H. Hare, Pawnee City, Nebr.—Bee-Keepers' Supplies and Italian Bees and Queens.

G. H. Grimm, Rutland, Vt.—Maple Syrup.

"Bees and Honey"—page 707.

Advertisements.

—CROSSMAN HAS THEM—

Those Beautiful Golden Queens

Reared from the best 5-Banded stock. **Unexcelled for Business, Beauty and Gentleness. Satisfaction guaranteed.**

Warranted Queens, after June 1, 90c. each; $9.00 per doz. Tested, $1.50 each; Sec. Test., $2.50. Safe arrival insured. Send for Circular.

W. P. CROSSMAN, Ballinger, Tex.

8A26t *Mention the American Bee Journal.*

50 Second-Hand Hives.

I **WILL** sell 30 New Heddon and 20 L. Simplicity hives. Frames filled with good straight combs, mostly wired, containing from 5 to 15 lbs. of honey to the hive. Price, of Heddon, $3.50, and L. Simplicity, $2.50 each. A discount of 5 per cent on orders for 20 hives and upwards. Will exchange for First-Class Incubator; Eggs for Hatching, of B. Leghorn and B. Plymouth Rock fowls; Italian queens, or a Spraying pump, as part pay for hives.

A. WORTMAN,
22A2t SEAFIELD, White Co., IND.
Mention the American Bee Journal.

It's Hard Work

To keep up with orders this spring. The last three days have brought Orders for 33 of those

5-Banded Italian Queens

And 20 of them go to parties who have **tried them before.** Get your order in soon, if you want Queens this month. After this month I can ship promptly. I guarantee entire satisfaction, as described in my Price-List.

One Warranted Queen, $1.00; 6 for $5.00.
Reference—G. W. York & Co. Money Order office, Cable, Ill.

S. F. TREGO, SWEDONA, ILL.
Mention the American Bee Journal.